

MEMORANDUM:

Subject: Residential Well Sampling (Radionuclide Analysis)
Paducah Gaseous Diffusion Plant
Paducah, Kentucky

From: Glenn Adams, Toxicologist
Ground-Water Technology Unit

To: Jeff Crane, Remedial Project Manager
Federal Facilities Section

Thru: Jon Isbell, Acting Chief
Ground-Water Technology Support Unit

On July 23, 1991, I sent you a memorandum on my review of the residential well data for the eight wells ESD sampled on April 2, 1991. I have now received the data from the radionuclide analysis which was done by the USEPA National Air and Radiation Environmental Laboratory (NAREL) in Montgomery, Alabama. This memorandum is to inform you of the results of this analysis.

The samples were analyzed by NAREL for gross alpha, gross beta, gamma, Tc-99, Th-230, Pu-239, U-234, U-235, and U-238. All of the private wells except for R-30 (a background well) had detections of one or more of these radionuclides, but all of these detections were below any of EPA's proposed or final National Primary Drinking Water Regulations (NPDWRs).

On July 18, 1991, EPA proposed NPDWRs for radionuclides. In this proposed rule were proposed Maximum Contaminant Levels for the radioactive contaminants of concern at the Paducah site. These pMCLs are listed below:

Gross beta	4	mrem/yr (final MCL)
Tc-99	3790	pCi/l (equivalent to 4 mrem/yr)
Gross alpha	15	pCi/l
Th-230	7.9	pCi/l *
Pu-239	6.2	pCi/l *
U(total)	20	pCi/l

* - Total of 15 pCi/l for ^{Alpha} ~~Beta~~ ^{each} ~~admitters~~ ^{both} of the values are equivalent to a E-5 risk level.

If you have any questions, please call me at x3866.

cc: Kay Wischkaemper
Elmer Akin

ADAMS _____ ISBELL _____
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